

Work Order ID 92980

November-12-12 3:33:09 PM

92980

Page 1

Item ID: 647.9012

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Fwd Clip

Stop

NS2

Start Date: 12/11/2012 Start Qty: 10.00

10

Cust Item ID:

Required Date: 03/12/2012 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12-11-13 Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
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647.9000	N/C
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110	0.00
-----	------

110

Waterjet

Memo

0.00

(16)

12-11-17

FLOW CNC Waterjet

1-Cut as per Dwg

Dwg Rev: N/C

Prog Rev: N/C

2-Deburr if necessary

120	QC2- Inspect parts off machine FAI/FAIB	0.00
-----	-----------------------------------------	------

120

QC

Memo

0.00

(6)

12-11-17

Quality Control

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS															
			Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Use-as-is <input type="checkbox"/>	Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Machining <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/>	Quality <input type="checkbox"/>	Other <input type="checkbox"/>
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance			Initial Chief Eng	Action Description			Sign & Date	Verification		QC Inspector							
Doc/Data																					
Equip/Tooling																					
Operator																					
Material																					
Setup																					
Other																					
Process																					
Supplier																					
Training																					
Unapproved																					
FAULT CATEGORY																					
Landing Gear Bending Centre Not Concentric to O/S Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion Turning Sequence Wave/Twist in Tube				General																	
				<input type="checkbox"/>	Bend	<input type="checkbox"/>	Grain	<input type="checkbox"/>	Ovalized	<input type="checkbox"/>	Pressure/Forced										
				<input type="checkbox"/>	BOM/Route	<input type="checkbox"/>	Hardware	<input type="checkbox"/>	Over/Under tolerance	<input type="checkbox"/>	Temperature/Cure										
				<input type="checkbox"/>	Broken/Damaged	<input type="checkbox"/>	Inspection Incomplete	<input type="checkbox"/>	Part Incorrect	<input type="checkbox"/>	Weld										
				<input type="checkbox"/>	Burrs	<input type="checkbox"/>	Instructions Incomplete/Unclear	<input type="checkbox"/>	Part Lost/Missing	<input type="checkbox"/>	Wrong Stock Pulled										
				<input type="checkbox"/>	Contamination	<input type="checkbox"/>	Maintenance	<input type="checkbox"/>	Part Moved	<input type="checkbox"/>											
				<input type="checkbox"/>	Countersink	<input type="checkbox"/>	Mislabeled	<input type="checkbox"/>	Positioned Wrong	<input type="checkbox"/>											
				<input type="checkbox"/>	Cut Too Short	<input type="checkbox"/>	Misread	<input type="checkbox"/>	Power Loss/Surge	<input type="checkbox"/>	Other										
				<input type="checkbox"/>	Drill Holes	<input type="checkbox"/>	Offset														
				<input type="checkbox"/>	Drawing	<input type="checkbox"/>	Out of Calibration														
				<input type="checkbox"/>	Finish	<input type="checkbox"/>	Out of Sequence														
				<input type="checkbox"/>	Folio	<input type="checkbox"/>	Outside Dimensions														

Work Order ID 92980

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92980

Page 2

Item ID: 647.9012

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Fwd Clip

Stop

NS2

Start Date: 12/11/2012 Start Qty: 10.00

10

Cust Item ID:

Required Date: 03/12/2012 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
Description

130

QC8- Inspect parts - second check

130

QC

Quality Control

Set Up/
Run Hours

0.00

15

9-89

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

Form as per dwg

0.00

140

Brake NC

Brake NC

0.00

15

SF
(2/11/22) PTO

150

QC5- Inspect part completeness to step on W/O

0.00

15

9-89

150

QC

Quality Control

0.00

12

1128

15

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA Chit Date: 13/11/22
QA Closed: C Date: 11/11/22

Work Order: <u>92980</u>		DISPOSITION			AGAINST DEPARTMENT/PROCESS																																						
		Rework <input type="checkbox"/>	Scrap <input checked="" type="checkbox"/>	Use-as-is <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Machining <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Small Fab <input checked="" type="checkbox"/>	Finishing <input type="checkbox"/>	Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/>	Quality <input type="checkbox"/>	Other <input type="checkbox"/>																								
Part No. <u>647-9012</u>		Work Order Update <input type="checkbox"/>																																									
NCR No. <u>13-2198</u>																																											
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description			Sign & Date	Verification		QC Inspector																														
Doc/Data	12/11/22	①	1	first piece was out of tolerance		DAS 16 9-82	Scrap & dispose QTY ①			SD 14/11/22	DAS 15 9-89 12/11/22		DAS 16 9-82 052042 12/11/22																														
Equip/Tooling				had more dug with change on it		12/11/22																																					
Operator																																											
Material																																											
Setup																																											
Other																																											
Process																																											
Supplier																																											
Training																																											
Unapproved																																											
FAULT CATEGORY																																											
Landing Gear				General																																							
				Bending <input checked="" type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>	Centre Not Concentric to O/S <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input checked="" type="checkbox"/>	Temperature/Cure <input type="checkbox"/>	Cracks <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>	Crushed/Crimped. <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>	Cuffs <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>		Heat Treat <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>		Inspection Strip in Tube <input type="checkbox"/>	Offset <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>		Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Other <input checked="" type="checkbox"/>		Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>			Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>		
															<p><i>add dug with change</i></p> <p><i>- still confusion between April Day</i></p>																												

Work Order ID 92980

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92980

Page 3

Item ID:	647.9012	Accept	*N900040100*	Setup	Start	*NS1*	
Revision ID:				Stop		*NS2*	
Item Name:	Fwd Clip						
Start Date:	12/11/2012	Start Qty:	10.00	*10*	Cust Item ID:		
Required Date:	03/12/2012	Req'd Qty:	10.00	*10*	Customer:		
Reference:							
Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:	Stop		*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160 *160* Outsource4	Outsource process-Anodize per QSI017 4.1.10.1	0.00							12-11-26
	Memo	0.00							
	ISSUE P/O: <u>18504</u>								
	HARD ANODIZE, COLOR BLACK AS PER DWG.(SEE NOTE 2)								

170 *170* Packaging	Receive & Inspect for Damage & Mat'l Certs	0.00							<i>11/12/12 (15)</i>
	Memo	0.00							

180 *180* QC	QC5- Inspect part completeness to step on W/O	0.00							<i>15 DAS 05-08-12-23</i>
	Memo	0.00							

NCR: Yes / No

DQA: Date:

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS								
				Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>						
				Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>						
				Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>						
				Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>							
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector				
Doc/Data														
Equip/Tooling														
Operator														
Material														
Setup														
Other														
Process														
Supplier														
Training														
Unapproved														
FAULT CATEGORY														
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled	

Work Order ID 92980

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Page 4

Item ID: 647.9012

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Fwd Clip

Stop

NS2

Start Date: 12/11/2012 Start Qty: 10.00

10

Cust Item ID:

Required Date: 03/12/2012 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan:

Date: Tooling:

Date:

Run Start

NR1

QC:

Date: SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

190

SprayPaint

Spray Painting

Memo

0.00

15 0

0

12-12-31

PRIME IAW MIL-P-23377J TYPE1 CLASS N AS PER DWG. (SEE NOTE 2)

PRIMER BATCH: 123693

200

QC14- Inspect Spray Paint

0.00

DAS

200

QC

Quality Control

Memo

0.00

15

05

13-01-05

210

Identify as per dwg & Stock Location: 1380

0.00

210

Packaging

Packaging

Memo

0.00

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV

13/01/15 (C)

NCR: Yes / No

DQA: Date:

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS						
				Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other				
Part No. _____		NCR No. _____										
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling												
Operator												
Material												
Setup												
Other												
Process												
Supplier												
Training												
Unapproved												
FAULT CATEGORY												
Landing Gear				General								
Bending		Bend		Grain		Ovalized		Pressure/Forced				
Centre Not Concentric to O/S		BOM/Route		Hardware		Over/Under tolerance		Temperature/Cure				
Cracks		Broken/Damaged		Inspection Incomplete		Part Incorrect		Weld				
Crushed/Crimped.		Burrs		Instructions Incomplete/Unclear		Part Lost/Missing		Wrong Stock Pulled				
Cuffs		Contamination		Maintenance		Part Moved						
Heat Treat		Countersink		Mislabeled		Positioned Wrong						
Inspection Strip in Tube		Cut Too Short		Misread		Power Loss/Surge						
Ripples in Bend		Drill Holes		Offset								
Torque Waves in Extrusion		Drawing		Out of Calibration								
Turning Sequence		Finish		Out of Sequence								
Wave/Twist in Tube		Folio		Outside Dimensions								

Work Order ID 92980

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92980

Page 5

Item ID: 647.9012

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Fwd Clip

Stop

NS2

Start Date: 12/11/2012 Start Qty: 10.00

10

Cust Item ID:

Required Date: 03/12/2012 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center ID

220

220

QC

Quality Control

Operation
Description

QC21- Final Inspection - Work Order Release

Set Up/
Run Hours

0.00

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Memo

0.00

13/11/10 JJ

MF
13-01-09

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS																																																	
Part No. _____	Work Order Update	Rework	Scrap	Use-as-is	Skid-tube	Machining	Thermoforming	Large Fab	Crosstube	Small Fab	Finishing	Composite	Water Jet	Prod. Eng. Coor.	Rec/Store/Packaging	Supplier	Engineering	Quality	Other																																			
NCR No. _____																																																						
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification		QC Inspector																																										
Doc/Data																																																						
Equip/Tooling																																																						
Operator																																																						
Material																																																						
Setup																																																						
Other																																																						
Process																																																						
Supplier																																																						
Training																																																						
Unapproved																																																						
FAULT CATEGORY																																																						
Landing Gear				General																																																		
				Bending	Bend	Grain	Ovalized	Pressure/Forced	Centre Not Concentric to O/S	BOM/Route	Hardware	Over/Under tolerance	Temperature/Cure	Cracks	Broken/Damaged	Inspection Incomplete	Part Incorrect	Weld	Crushed/Crimped.	Contamination	Maintenance	Part Lost/Missing	Wrong Stock Pulled	Cuffs	Countersink	Mislabeled	Part Moved	Other	Heat Treat	Cut Too Short	Misread	Positioned Wrong	Power Loss/Surge	Inspection Strip in Tube	Drill Holes	Offset			Ripples in Bend	Drawing	Out of Calibration			Torque Waves in Extrusion	Finish	Out of Sequence			Turning Sequence	Folio	Outside Dimensions			Wave/Twist in Tube

Picklist Print

November-12-12 3:33:13 PM

Work Order ID: 92980

Parent Item: 647.9012

Parent Item Name: Fwd Clip

2
92980
647 9012

Start Date: 12/11/2012

Start Qty: 10.00

Required Date: 03/12/2012

Required Qty: 10.00

Comments: IPP REV: A 12.11.01 NEW ISSUE DD VERF;JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.063		Purchased	No			110	sf	112.4200	0.034	0.357895			

M2024T3S 063

2024-T3 .063 sheet

**

B1L+11-17

Location	Loc Qty	Loc Code
MAT022	112.42	
119916	0.1	
121197	16.32	
123654	96	

(6)

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. _____		Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
NCR No. _____		Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
		Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
		Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									
FAULT CATEGORY									
Landing Gear	General								
	Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>				
	Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>				
	Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>				
	Crushed/Crimped <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>				
	Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>					
	Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>					
	Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	Other <input type="checkbox"/>				
	Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>						
	Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>						
	Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>						
	Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>						

DART AEROSPACE LTD	Work Order:	92980
Description: Fwd. Clip	Part Number:	647-9017
Inspection Dwg: 647-9017 Rev: N/C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Measured by: <u>B</u>	Audited by: <u>15</u> <u>12/11/17</u>	Preliminary Approval: <u>DAS</u> <u>12/11/17</u>
Date: <u>12-11-17</u>	Date: <u>12/11/17</u>	Date: <u>12/11/17</u>

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15.

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03266			SHEET 1 OF 2	
	DWG NO. 647.9000	REV: N/C	PREPARED BY A. QUAN	DATE: 11/15/11	EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC.
DWG TITLE: SHEETMETAL					
APPROVED BY:	ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	<i>[Signature]</i>	EFF: CURRENT ORDER AND STOCK	
TRANSACTION CODES (TC) A-ADD C-CREATE R-REVISE D-DELETE	REASON: REVISED 647.9014 MATERIAL, REVISED DIMENSIONS OF P/N 647.9012				

SHEET 1, NOTES:

NOTES: UNLESS OTHERWISE SPECIFIED

1 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4

2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N

3. DEBURR AND BREAK ALL SHARP EDGES

4. IDENTIFY IAW MPP-120. LASER ETCH P/N AND REVISION 12PT. CENTURY GOTHIC.

5. ALL DIMENSIONS SHOWN PRIOR TO FINISH.

6. PART DIMENSIONS CONTROLLED BY CAD MODEL; FILE NAME: 647.9016 DOUBLER.SLDPRT-LAST MODIFIED 06-29-10

7. INSPECTION DIMENSIONS SHOWN WITH FINISH APPROX. 3-5 MIL MAX PER FACE.

8 MATERIAL: 304SS IAW AMS 5643

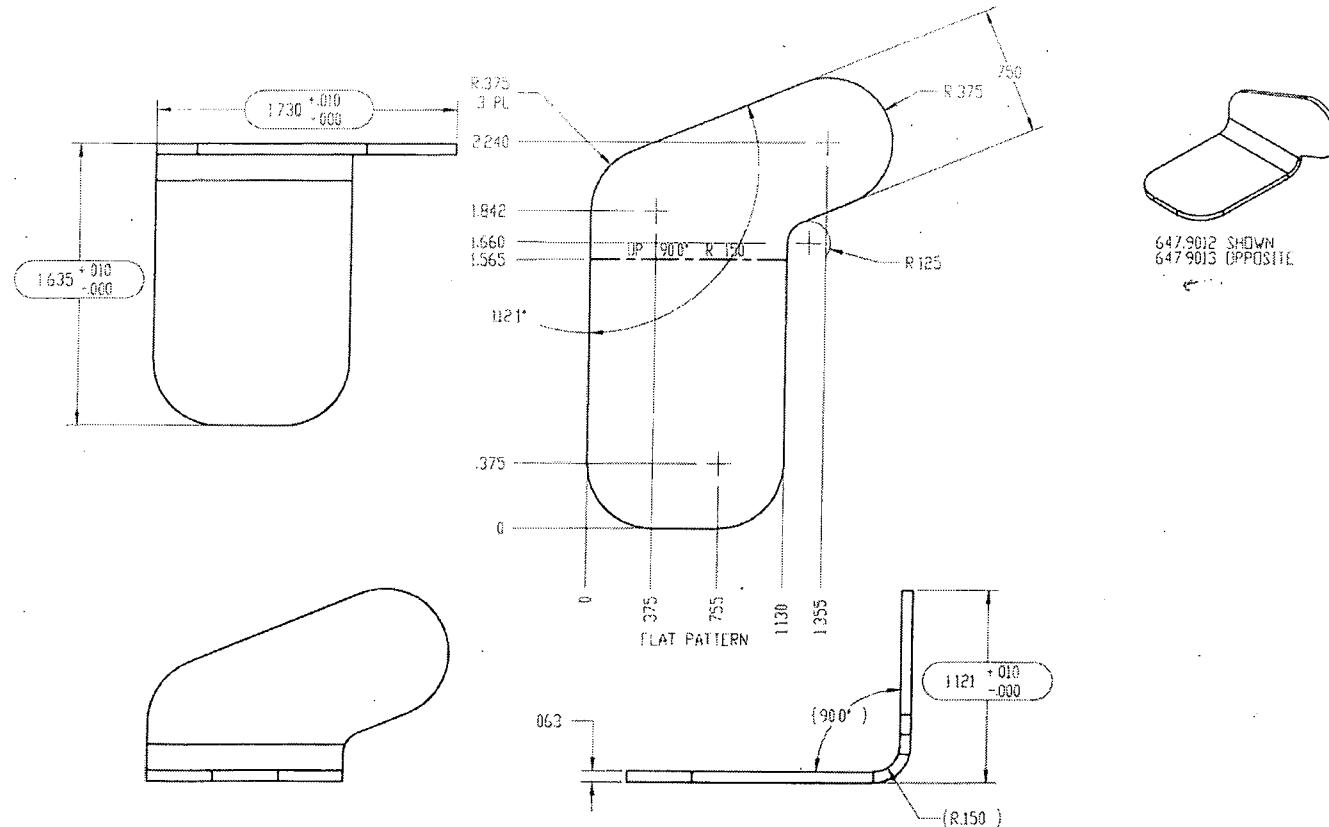
9 FINISH: PRIME IAW MIL-P-23377J, TYPE I, CLASS N

SHOP
REVIEW
ENGINEER
UNCONTROLED
SUBJECT TO CHANGE
WITHOUT NOTICE
WORK ORDER
NO. 92980.MLT

12-11-13

IS

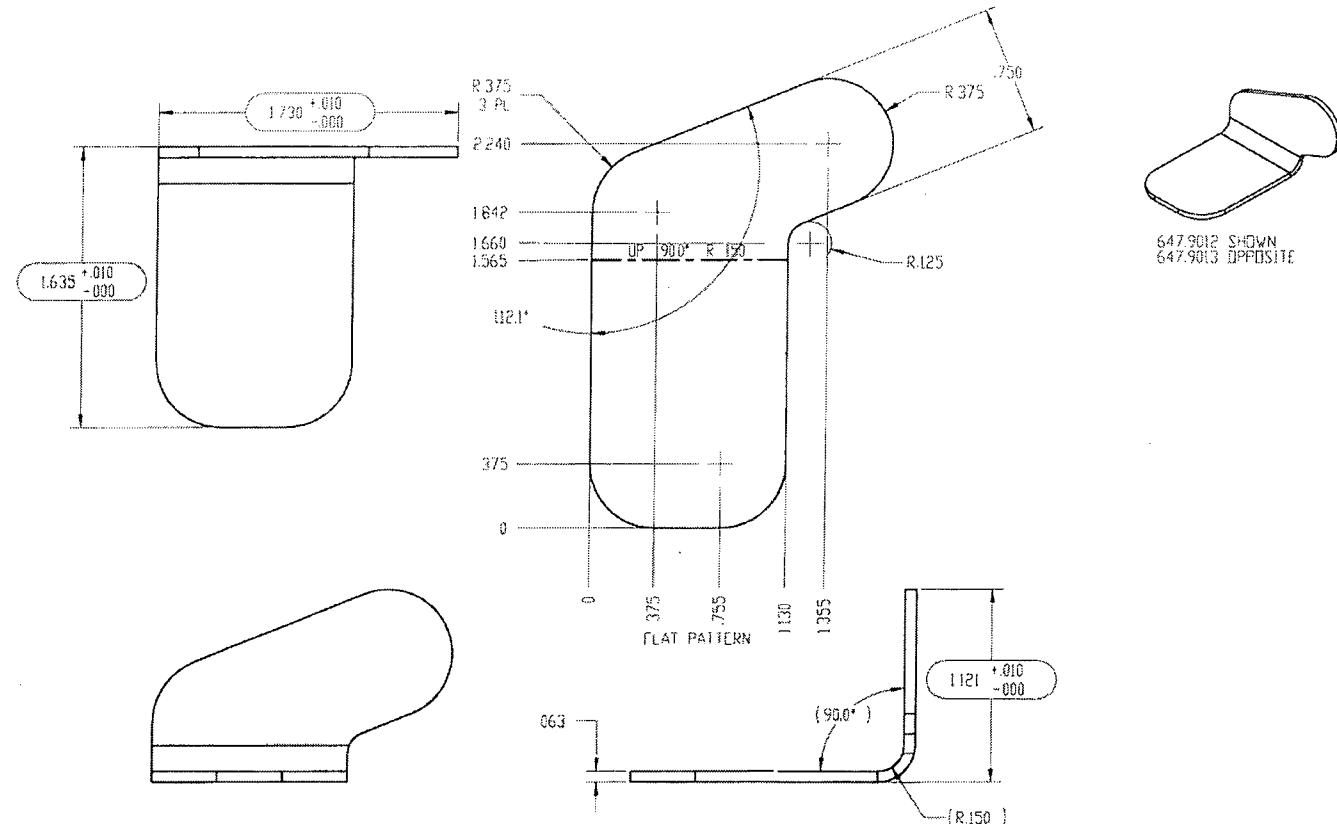
5	R	647.9014		STRUT BRACKET	8	9
F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				□ MDL □ INSTALL INSTRUC □ ICA <input checked="" type="checkbox"/> BOM	CHANGE CATEGORY □ MAJOR <input checked="" type="checkbox"/> MINOR	DER REVIEW REQUIRED □ YES <input checked="" type="checkbox"/> NO

SHEET 3, IS:

F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTIC.			NO. 03213	SHEET 1	OF 1	
	DWG NO. 647.9000		REV: N/C	PREPARED BY A. QUAN	DATE: 11/09/11		EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC.
	DWG TITLE: SHEETMETAL						
	APPROVED BY:	ENGR <i>[Signature]</i>	MFG <i>Daron Parker</i>	QC <i>Mauri Lyman</i>	EFFI CURRENT ORDER AND STOCK		
	TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: REVISED 647.9013 DIMENSIONS				

SHEET 3, IS:



F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				CHANGE CATEGORY <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR		DER REVIEW REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRUC <input type="checkbox"/> ICA <input type="checkbox"/> BOM						

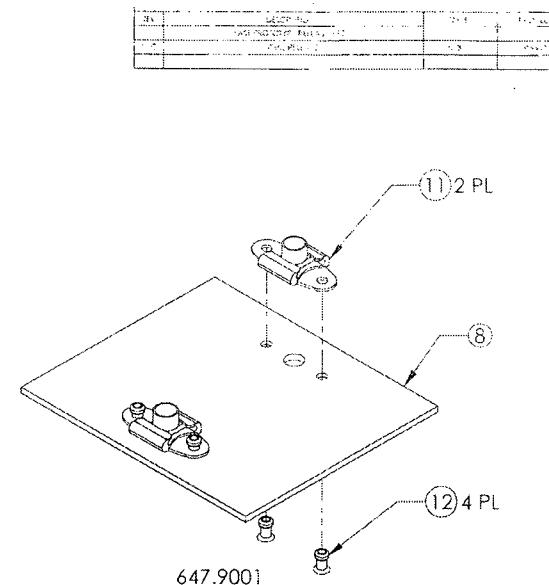
92980

NOTES: UNLESS OTHERWISE SPECIFIED

1 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4

2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N

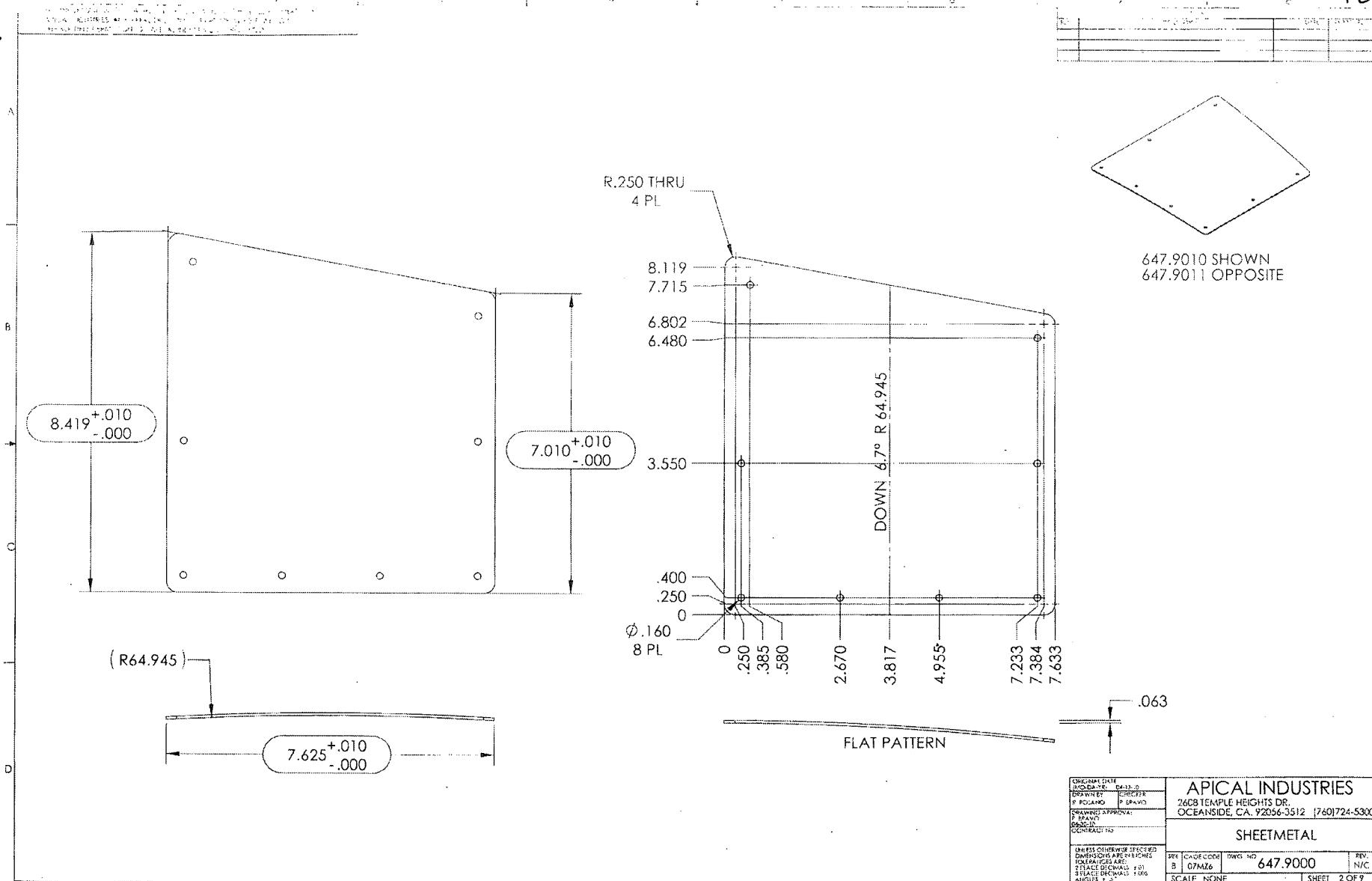
3. DEBURR AND BREAK ALL SHARP EDGES
4. IDENTIFY IAW MPP-120. LASER ETCH P/N AND REVISION 12PT. CENTURY GOTHIC.
5. ALL DIMENSIONS SHOWN PRIOR TO FINISH.
6. PART DIMENSIONS CONTROLLED BY CAD MODEL; FILE NAME: 647.9016 DOUBLER.SLDPRT-LAST MODIFIED 06-29-10
7. INSPECTION DIMENSIONS SHOWN WITH FINISH APPROX. 3-5 MIL MAX PER FACE.

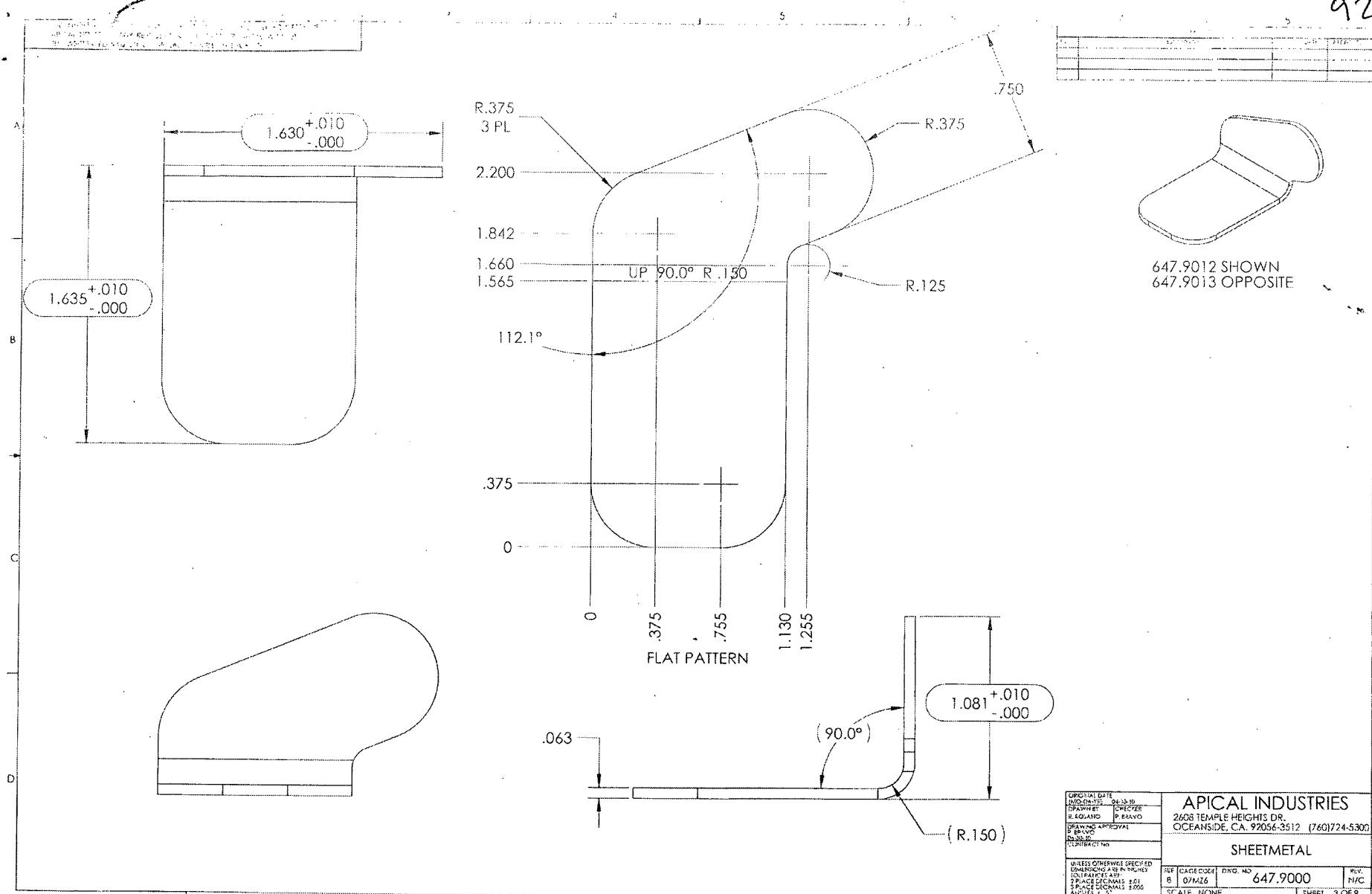


UNINCORPORATED ECN(s)

03213, 03246

	4	12	601.2277	RIVET	QCP7455 3-02
2	11	601.1900	NUTPLATE	MS21659.3	
	10	647.2019	HINGE		
	9	647.9018	DOUBLER		
1	8	647.9017	DOUBLER		
	7	647.9016	DOUBLER		
	6	647.9015	DOUBLER		
	5	647.9014	STRUT BRACKET		
	4	647.9013	FWD CLIP		
	3	647.9012	FWD CLIP		
	2	647.9011	DOUBLER		
	1	647.9010	DOUBLER		
		647.9001	DOUBLER ASSY		
	9001	FIND #	PART #	DESCRIPTION	MATL
					SPEC.
PARTS LIST					
NEXT ASSY IS: 647.9001 DRAWN BY: JRC/CEP 647.9000 DRAWN APPROV'D BY: P.GAVO 647.9400 DRAWN APPROV'D BY: P.GAVO 647.9010 DRAWN APPROV'D BY: P.GAVO					
APICAL INDUSTRIES 2668 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300					
SHEETMETAL					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE .010 PLATE THICKNESS .030 STRAIGHTNESS .005 ANGLES ±3°					
REV	0	0/M66	DWG NO	647.9000	N/C
SCALE	None				SHEET 1 OF 9



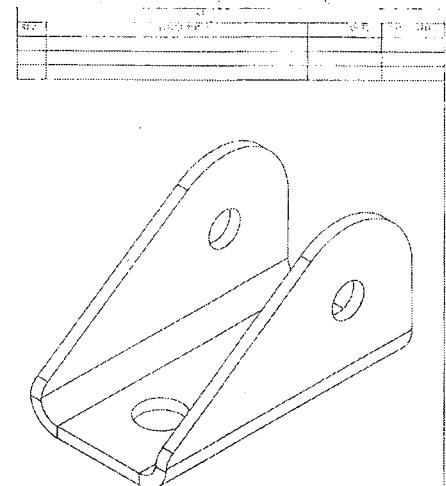
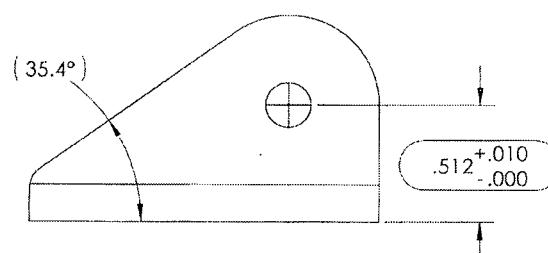
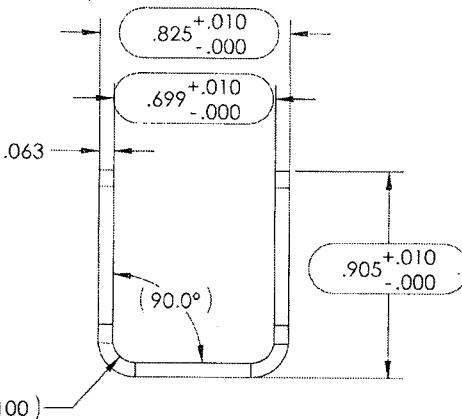
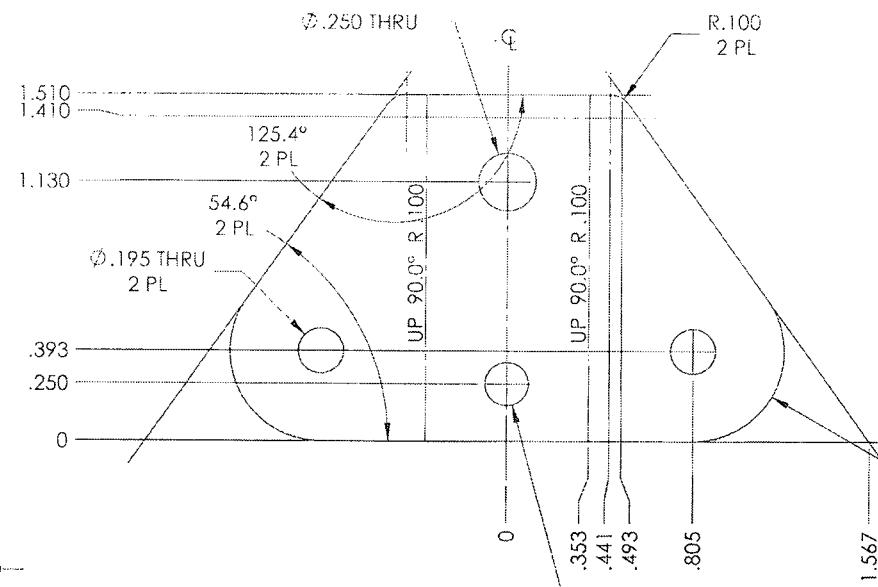
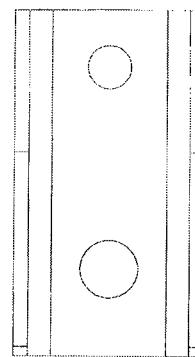


ORIGINAL DATE	04-13-90		
DRAWN BY	CHIEZER		
RE-QUALIFIED	P. BRAVO		
DRAWING APPROVAL	04-13-90		
RE-QUALIFIED	04-13-90		
CHIEZER	CHIEZER		
APICAL INDUSTRIES			
2608 TEMPLE HEIGHTS DR.			
OCEANSIDE, CA. 92056-3512 (760)724-5300			
SHEETMETAL			
REF	CAGE CODE	DIV. NO.	REV.
B	07/MZ	647.9000	N/C
SCALE NONE SHEET 3 OF 9			

3 4 5

97980

A
B
C
D



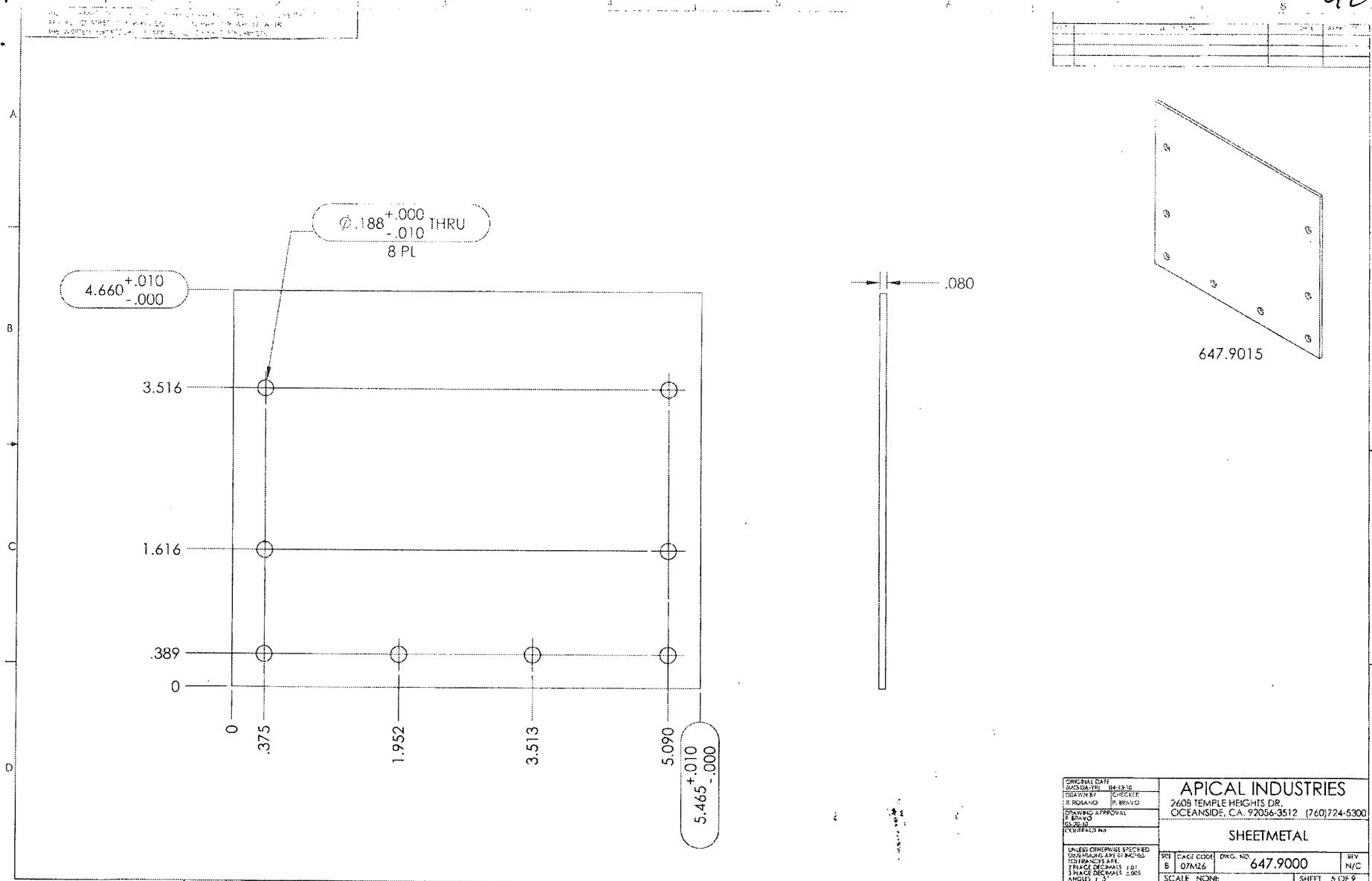
647.9014

ORIGINAL DATE	07-10-00	REV.			
DRAWN BY	CHICHEP				
APPROVED BY	R. POSADA				
PRINTING APPROVAL	0-20-10				
CONTRACT NO.					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES EXACT DECIMALS 1:01 SPACE DECIMALS 1:009 ANGLE 2:07					
REF.	07M16	PIG. NO.	647.9000	REV.	N/C
SCALE	NONE	SHEET 4 OF 9			

APICAL INDUSTRIES

2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

SHEETMETAL



GENERAL DATA	04-10-0	APICAL INDUSTRIES
DRAWN BY	SCHECKER	2608 TEMPLE HEIGHTS DR.
VERIFIED BY	ROSAKO	OCEANSIDE, CA 92056-3512 (760)724-5300
DRAWING APPROVAL		
04-20-10		
EX-00000000		
UNLESS OTHERWISE SPECIFIED		
ALL DIMENSIONS ARE IN INCHES		
TOLERANCE DECALLS 1.01		
ANGLE DECALLS 1.005		
REV		
B	07M26	DRAW. NO. 647.9000
SCALE	NONE	SHEET 5 OF 9

97980

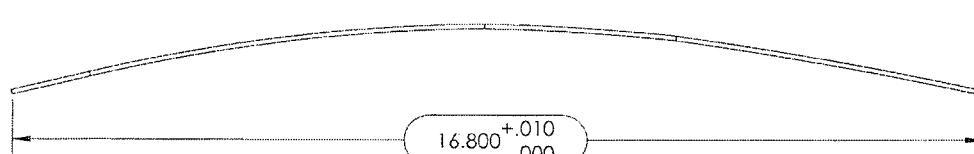
APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE CA 92056-3512 (760)724-5300

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE CA 92056-3512 (760)724-5300

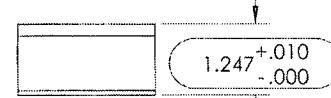
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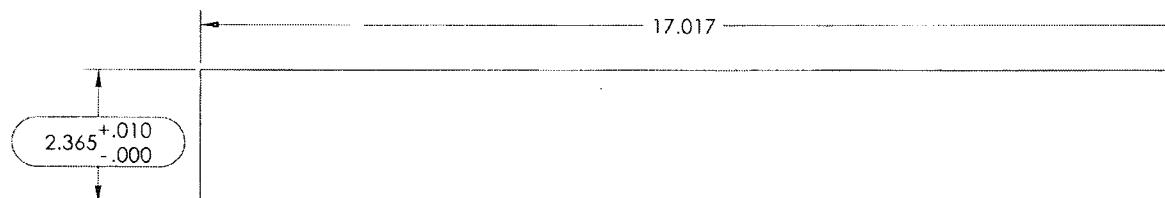
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C



D



FLAT PATTERN

.080

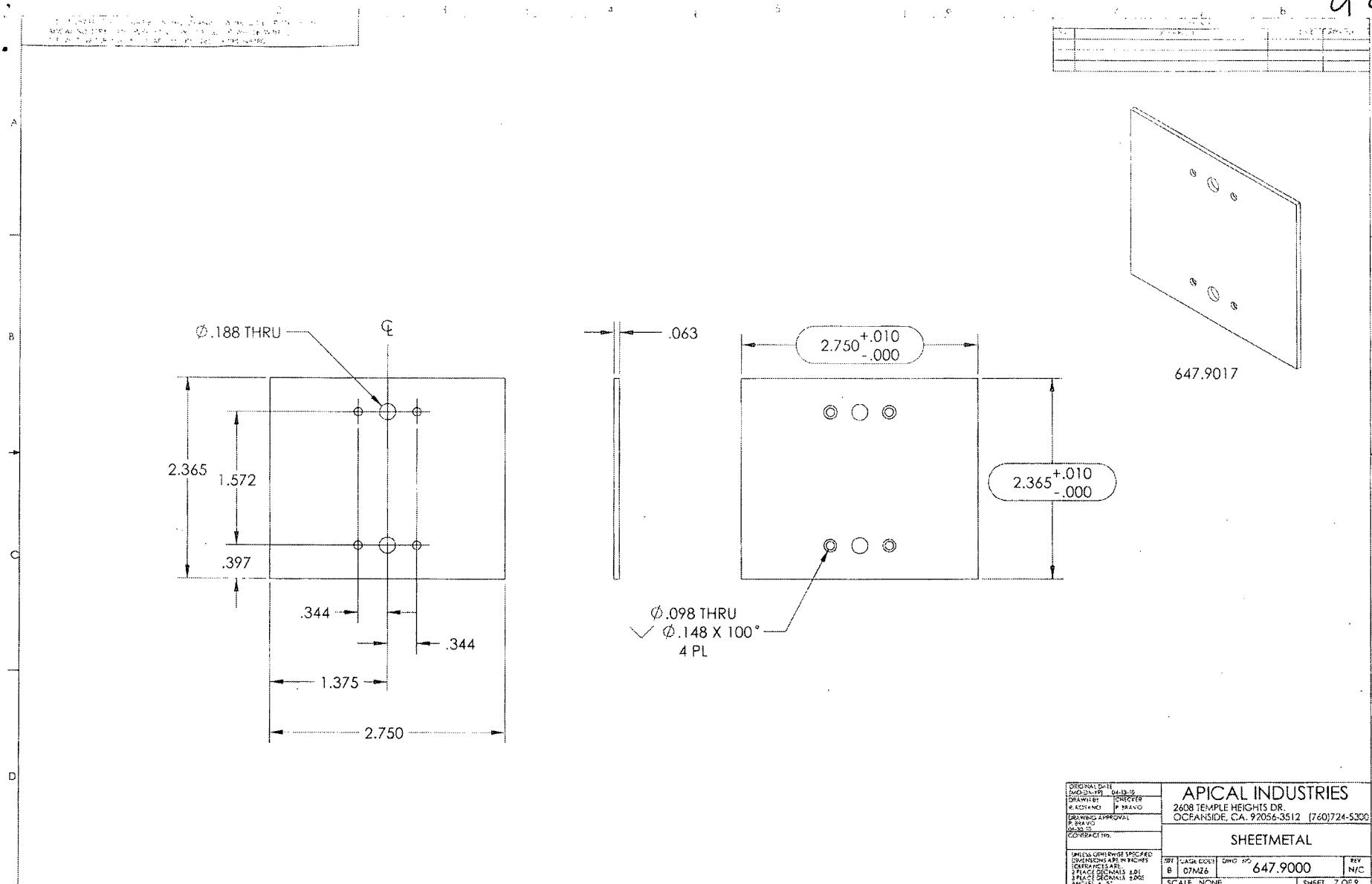
DRAWN BY	CHUCKER
RE REV'D BY	E. ROLAND
DRAWING APPROVAL	CHUCKER
CONTRACT NO.	CH-3512
UNLESS OTHERWISE SPECIFIED THREE FIGURES AFTER DECIMAL POINT 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.001 PRIMER: S-2	
DATE	07M16
CAGE CODE	647.9000
REV	N/C

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE CA 92056-3512 (760)724-5300

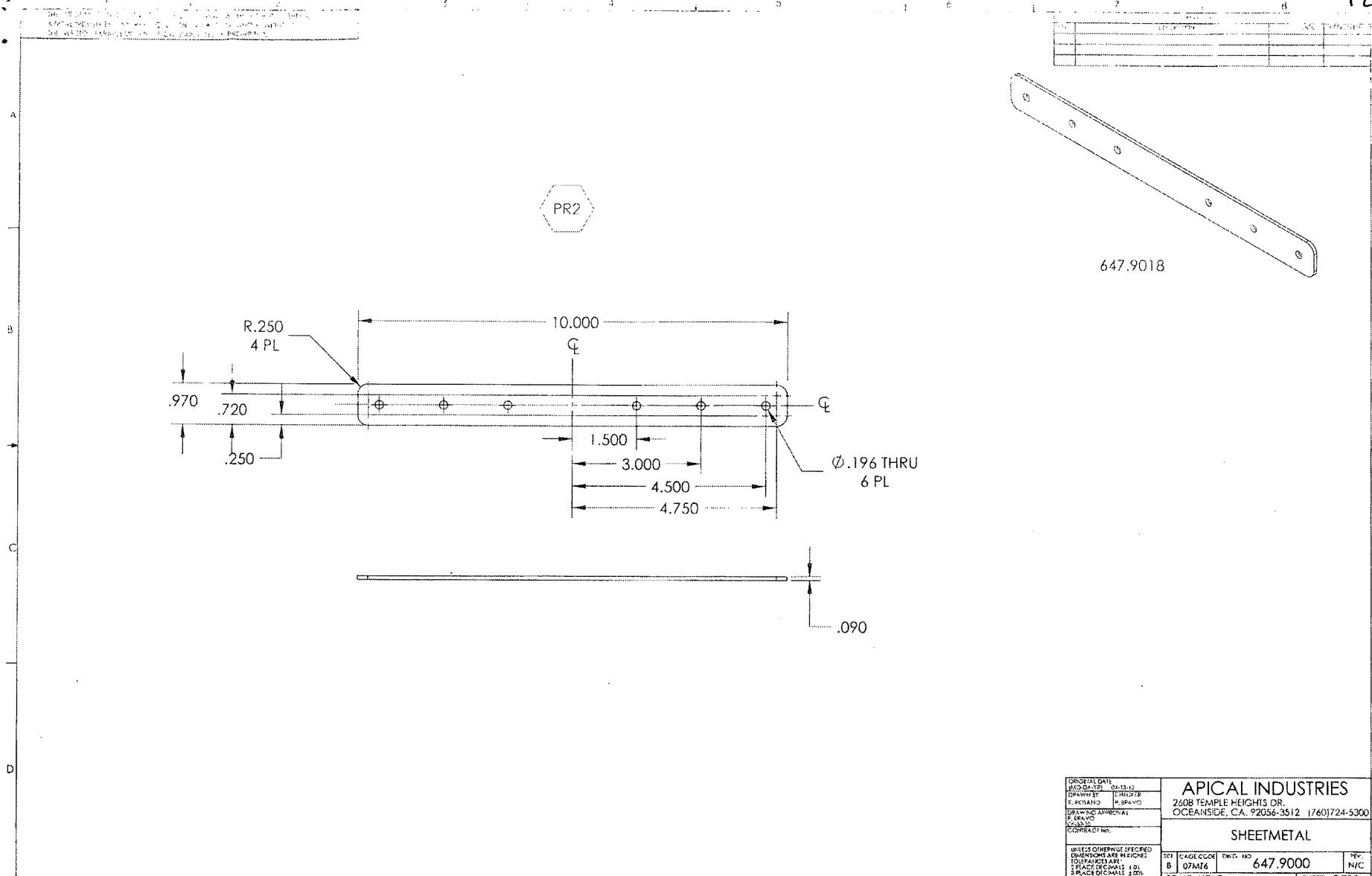
SHEETMETAL

DATE 07M16 CAGE CODE 647.9000 REV N/C
SCALE NONE SHEET 6 OF 9

92980



97980



92980

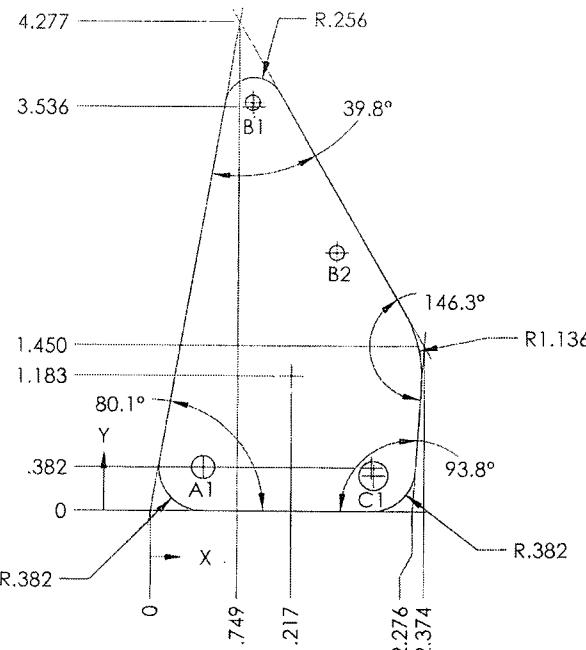
APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

A

PR2

B



C

D

TAG	X LOC	Y LOC	SIZE
A1	.455	.382	Ø.201 THRU
B1	.867	3.573	Ø.130 THRU
B2	1.614	2.266	Ø.130 THRU
C1	1.939	.312	Ø.250 THRU

ORIGINAL DATE	01-12-19	APICAL INDUSTRIES
DRAWN BY	CHIEF	2608 TEMPLE HEIGHTS DR.
R. ROSANO	P. SAVIO	OCEANSIDE, CA. 92056-3512 (760)724-5300
DRAWING APPROVAL		
01-30-19		
CHARACTERS		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES 1 PLACE DECIMALS 2 PLACES DECIMALS +.01 3 PLACES DECIMALS +.001 ANGLES +.2°		
REV		
SERIAL CODE	INVENT. NO.	
B 07M16	647.9000	N/C
SCALE	None	Sheet 9 of 9



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada
Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 62107

Date: 12-Dec-12

To

DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms	Ship Via
Quantity	Description
1 lot	Part: ASST 8 PCS 647.1610 5 PCS 647.1612 2 PCS 647.1713 6 PCS 647.1811 1 PC 647.1816 1 PC 647.1817 8 PCS 647.1818 11 PCS 646.3210 20 PCS 646.3313 10 PCS 646.3717 20 PCS 646.3717 16 PCS 647.4610 10 PCS 649.4811 10 PCS 649.4812 24 PCS 649.4814 30 PCS 649.4815 6 PCS 647.7913 3 PCS 647.7919 10 PCS 647.9010 10 PCS 647.9011 15 PCS 647.9012 40 PCS 647.9013 60 PCS 646.9710 HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 Job: 20120768
	Rev: PO: PO18506 Line:
	<p>Certificate of Conformance</p> <p>A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.</p> <p>ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY</p> <p>DATE: <u>12/12/12</u></p>



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada
Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 62107

Date: 12-Dec-12

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms	Ship Via
Quantity	Description
	<p>CERTIFIED SIGNATURE: <u>Mr</u> RECEIVER SIGNATURE: <u>John</u></p>